Impact Case Reports

Case Report

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Simultaneous transverse and sigmoid colon volvulus: A case report

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Abstract

Introduction: Colonic volvulus refers to the axial twisting of the colon on its mesentery, resulting in large bowel obstruction (LBO). The sigmoid colon is most commonly involved (up to 75%), followed by the caecum (22%). Volvulus of the transverse colon and splenic flexure is rare (2% and 1–2%, respectively). Simultaneous volvulus involving multiple colonic segments is extremely uncommon, with very few reported cases. Prompt diagnosis and surgical intervention are essential.

Methods: A 49-year-old female presented with intermittent crampy abdominal pain for two weeks and failure to pass faeces or flatus for three days. Her abdomen was grossly distended but non-tender, and there were no signs of peritonitis. A plain abdominal X-ray indicated large bowel obstruction, likely secondary to sigmoid volvulus. Rectal tube decompression was attempted but failed. Exploratory laparotomy revealed simultaneous volvulus of both the transverse and sigmoid colon, twisted approximately 270° clockwise on their mesenteries. The bowel was viable, and simple detorsion was performed. The patient recovered well and was discharged on the fourth postoperative day.

Discussion: Simultaneous transverse and sigmoid volvulus is an extremely rare but serious cause of LBO. Clinical and radiological findings often overlap with other types of colonic obstruction, and standard imaging may be inconclusive. Diagnosis is frequently made intraoperatively. Given the increased risk of ischaemia with dual-site volvulus, timely surgical intervention is critical. This rare condition should be considered in the differential diagnosis of LBO when typical signs are absent and initial decompression fails.

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Introduction

Colonic volvulus is an axial twisting of a redundant segment of the colon on its own mesentery, leading to large bowel obstruction (LBO). It can result in colonic ischaemia or gangrene. It is the leading cause of LBO in sub-Saharan Africa, accounting for 69% [1–4]. Sigmoid volvulus is the most common type (60–75%), while transverse colon volvulus accounts for 4%[1–3,5]. Simultaneous transverse and sigmoid volvulus is extremely rare, with only 10 cases reported in the literature, and presents unique clinical challenges and life-threatening risks. The clinical findings resemble other causes of LBO, and imaging may not always identify the cause [1,2,6,7]. Timely surgical intervention is crucial to reduce the morbidity and mortality associated with this rare condition [2,6,8]. There are no formal guidelines, and the surgical approach must be individualised[1]. Despite its rarity, the diagnosis of simultaneous transverse and sigmoid colon volvulus should be considered in the differential diagnosis of LBO. This case is reported according to the CARE guideline.

Case report

We present a 49-year-old female who presented with a complaint of intermittent crampy abdominal pain of two weeks' duration. Associated symptoms included constipation, abdominal distension, and three episodes of vomiting of ingested matter. She had no prior history of surgery and no personal or family history of colorectal cancer. On examination, the patient appeared acutely ill, although all vital signs were within normal ranges. The abdomen was hyper-tympanic to percussion but there was no sign of peritonitis. Digital rectal examination revealed an empty rectum, with no palpable mass. Blood tests were within normal limits. A plain abdominal X-ray showed LBO secondary to suspected sigmoid volvulus (Figure 1).

With this impression, rectal tube deflation was attempted. We waited for a few hours, but there was no passage of flatus or faeces. With the impression of failed rectal tube deflation, an exploratory laparotomy was performed. The abdomen was entered through a midline vertical incision. Both the transverse and sigmoid colon were hugely distended and twisted approximately 270° clockwise on their mesentery (Figure 2). The colon was viable, and simple detorsion was performed. Intraoperatively, a rectal tube was inserted and removed after 24 hours. The patient had an uneventful postoperative course. Cleansing enemas were administered on the third and fourth postoperative days. She was discharged on the fourth postoperative day. On the ninth postoperative day, the patient returned with a complaint of constipation. After being advised to undergo laparotomy and possible colectomy, she declined, and was successfully discharged again.

Discussion

Simultaneous volvulus is very rare, although synchronous sigmoid and caecal volvulus are more common [1,3]. Males tend to be more affected than females, with a mean age of 67 years [1,3]. Our patient was a 49-year-old female. Most patients present with chronic constipation and classic features of LBO [1], which was also seen in our case. In resource-limited settings, plain abdominal X-ray is the initial investigation of choice, even though it rarely provides a definitive diagnosis [1]. The classic X-ray signs such as the coffee bean or inverted U-shaped appearance are typically absent in simultaneous colonic volvulus. Instead, diffuse colonic distension is commonly observed, which was also the finding in our case [1–4,6].

Because the obstruction occurs at two sites, the risk of ischaemia and gangrene is significantly higher, necessitating timely intervention [1,3]. Surgery is the mainstay of treatment for simultaneous volvulus [1,7]. Colectomy with either immediate or delayed anastomosis is the most frequently performed procedure. Another surgical option is detorsion with colopexy [1,2]. However, there is no standardised protocol, and the choice of surgical technique depends on the patient's overall condition, the viability of the bowel, and the surgeon's judgment [2]. Due to technical challenges and high recurrence rates, endoscopic decompression is not advisable. We initially attempted rectal tube decompression considering sigmoid volvulus, but the attempt failed, necessitating exploratory laparotomy and detorsion [1–3,7].

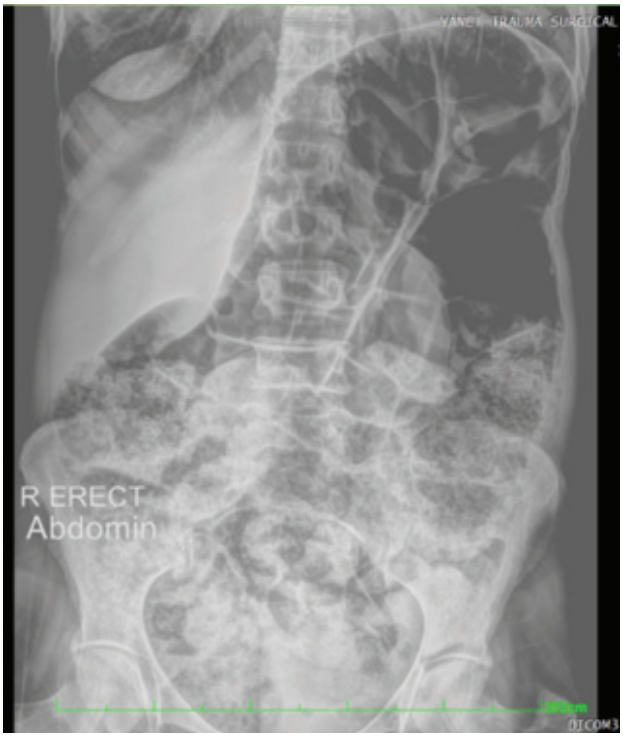

Figure 1. An erect plain abdominal X-ray of the patient.

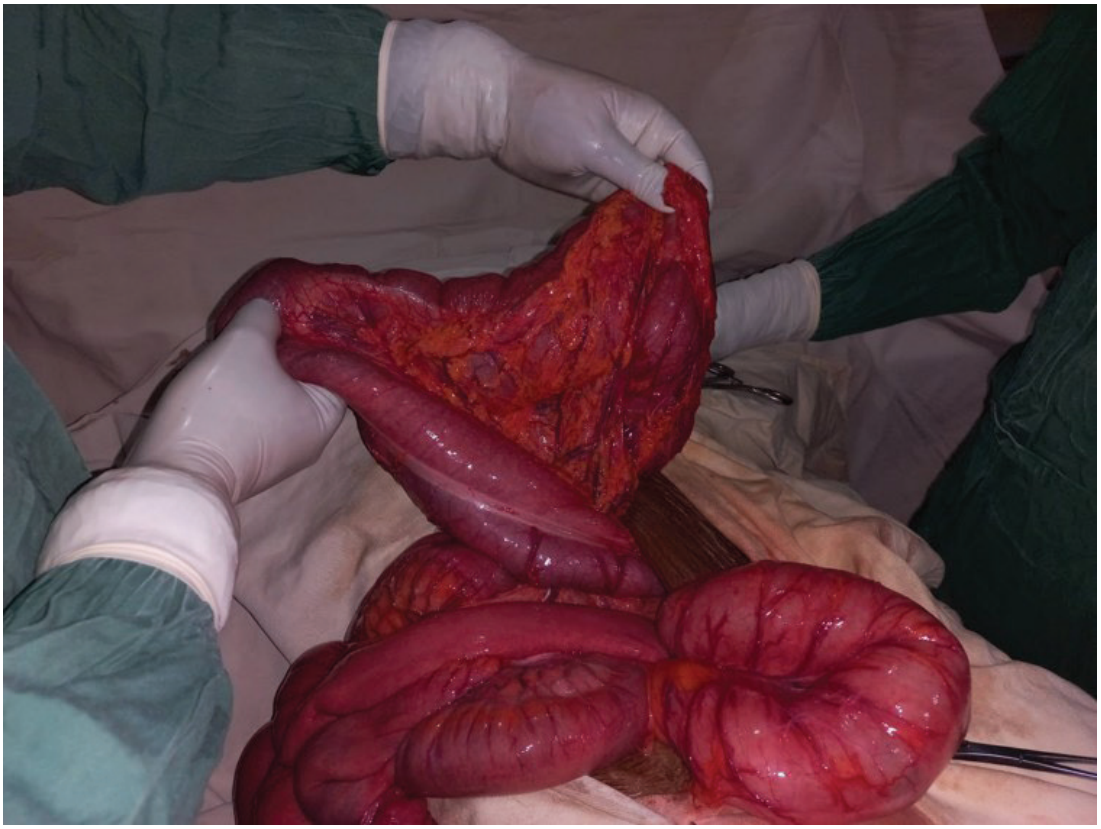

Figure 2. Intraoperative finding of simultaneous transverse and sigmoid volvulus.

Conflicts of interest: The authors have no conflict of interest to disclose.

Consent: The patient granted written informed consent for the publication of this case report which is held by the authors, after obtaining authority from the Institutional Review Board (IRB) at Hawassa University.

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